

by residential and industrial development, conversion of habitat to pasture or small ponds, timber harvesting, or cattle grazing. This action will implement the protection of the Act.

**EFFECTIVE DATE:** May 15, 1989.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours at the Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

**FOR FURTHER INFORMATION CONTACT:** Mr. Robert R. Currie at the above address (704/259-0321 or FTS 672-0321).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Hexastylis naniflora* is a rare low-growing herbaceous plant in the birthwort family (Aristolochiaceae). The species was described by Blomquist (1957) in his revision of the North American members of the genus *Hexastylis*. The plant's heart-shaped leaves are dark green in color, evergreen and leathery, and are supported by long thin petioles from a subsurface rhizome. Maximum height rarely exceeds 15 centimeters (6 inches). The jug-shaped flowers are usually beige to dark brown in color and appear from mid-March to early June. The flowers are small and inconspicuous and are found near the base of the petioles. The fruit matures from mid-May to early July (Blomquist 1957, Gaddy 1980, 1981). *Hexastylis naniflora* grows in acidic soils along bluffs and adjacent slopes, in boggy areas next to streams and creekheads, and along the slopes of nearby hillsides and ravines (Gaddy 1980, 1981). The species is distinguished from other members of the genus *Hexastylis* by its small flowers and its distinctive habitat.

*Hexastylis naniflora* is known only from an eight-county area in the upper piedmont of North Carolina and adjacent South Carolina. There are 24 known populations of this species. The following summary of the known distribution of *Hexastylis naniflora*, by State and county, is extracted primarily from Gaddy (1980, 1981). Additional information was supplied by Rayner (South Carolina Wildlife and Marine Resources Department, personal communication, 1986, 1987), Mansberg (North Carolina Department of Natural Resources and Community Development, personal communication, 1986, 1987), and Newberry (University of South Carolina at Spartanburg, personal communication, 1987).

**South Carolina**

Cherokee County supports only one population of approximately 150 plants. The plants are growing in an area which has been adversely impacted by siltation from road construction.

Greenville County supports eight populations of *Hexastylis naniflora*. The populations vary in size from 50 to several hundred individuals. Most of the populations are adjacent to the rapidly expanding Greenville urban area or its suburbs and are threatened by loss of habitat to residential, commercial, or industrial construction. Agricultural activities, such as conversion of woodlands to pasture or construction of small ponds, also threaten the species. Timber harvesting, except for small, selective cuts, would also adversely impact the species.

Spartanburg County supports three populations of the species. One of these contains 2 individuals, one contains 75 individuals, and the last contains approximately 1,400 individuals. The largest population in the county once contained over 4,000 plants; however, 64 percent of the population was destroyed by reservoir construction. Most of the remaining plants in this population are being protected from further destruction by the City of Spartanburg (commissioners of public works). The smallest population (two plants) is within the right-of-way of the planned relocation of an interstate highway. The population of 75 plants has been adversely impacted by soil erosion caused by grazing cattle.

**North Carolina**

Cleveland County contains three populations. One of these supports only 10 plants and occurs on a poor quality site. The other 2 populations contain about 200 plants each. These two larger populations are threatened by timber harvesting, conversion of their habitat to pasture or small ponds, and cattle grazing.

Catawba County supports one large, healthy population of over 1,000 plants. This site has been protected to a limited extent through the Natural Areas Registry Program of the North Carolina Natural Heritage Program. This program alerts cooperative landowners to the significance of natural features on their property. It does not, however, provide long-term protection from the threats facing most populations of *Hexastylis naniflora*.

Burke County contains 3 populations, varying in size from 10 to approximately 500 individuals. The smallest population is on a poor quality site that is littered

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**Endangered and Threatened Wildlife and Plants; Threatened Status of *Hexastylis naniflora* (Dwarf-flowered Heartleaf)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines *Hexastylis naniflora* to be a threatened species under authority of the Endangered Species Act of 1973, as amended (Act). This species is known only from a small portion of the upper piedmont of southern North Carolina and adjacent South Carolina. Most of the known populations are threatened

with trash. The two larger populations remain vulnerable to loss or adverse modification of their habitat.

Rutherford County currently contains three populations of *Hexastylis naniflora*. A fourth population was recently destroyed by road construction. The largest population, containing over 1,000 plants, is a registered natural area and thereby receives limited short-term protection. The smaller populations, 60 and 250 individuals respectively, are threatened by the same activities previously mentioned.

There are three records of *Hexastylis naniflora* from Lincoln County. One population has not been recently verified and may be lost, one has been destroyed, and the last contains about 160 healthy plants. The site supporting these plants has been selectively logged and remains vulnerable to destruction by clear-cutting of timber and other previously referred to activities.

Federal government actions on this species began with section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice (40 FR 27823) which formally accepted the Smithsonian report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act. By accepting this report as a petition, the Service also acknowledged its intention to review the status of those plant taxa named within the report. *Hexastylis naniflora* was included in the Smithsonian report and the July 1, 1975, notice of review. On June 16, 1976, the Service published a proposed rule (41 FR 24523) to determine approximately 1,700 vascular plant taxa to be endangered species pursuant to section 4 of the Act; *Hexastylis naniflora* was included in this proposal.

The 1978 amendments to the Act required that all proposals over 2 years old be withdrawn. On December 10, 1979 (44 FR 70796), the Service published a notice withdrawing plants proposed on June 16, 1976. In 1979 the Service also funded a status survey for this species with the final status report being completed in 1980. Based upon the information provided in the status report, *Hexastylis naniflora* was included as a category 1 species in the December 15, 1980, revised notice of review for native plants (45 FR 82480). *Hexastylis naniflora* was again included as a category 1 species in the September 27, 1985, publication of an updated

notice of review for native plants (50 FR 39526). Category 1 species are those for which the Service currently has on file information to support the proposed addition of the species to the Federal list of endangered and threatened species. Publication of proposed rules for some of these species has been delayed because of the large number of species within this category.

Section 4(b)(3)(B) of the Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Hexastylis naniflora* because of the acceptance of the 1975 Smithsonian report as a petition. In 1983, 1984, 1985, 1986, and 1987, the Service found that the petitioned listing of *Hexastylis naniflora* was warranted but precluded by other listing actions of a higher priority and that additional data on vulnerability and threats was still being gathered.

On April 21, 1988, the Service published (53 FR 13223) a proposal to list *Hexastylis naniflora* as a threatened species. That proposal constituted the final finding as required by the 1982 amendments to the Endangered Species Act.

#### Summary of Comments and Recommendations

In the April 21, 1988, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the *Greenville News* (Greenville County), *Spartanburg Herald* (Spartanburg County), *Gaffney Ledger* (Cherokee County), *Shelby Star* (Cleveland County), *Hickory Daily Record* (Catawba County), *Lincoln Times* (Lincoln County), *News Herald* (Burke County), and *Daily Courier* (Rutherford County). One comment was received in response to the proposed rule. The Catawba County manager's office stated that it knew of no conflicts between county projects and protection of the Catawba County site. They outlined several protective measures that may be applicable to the population and stated that the county did not object to designation of *Hexastylis naniflora* as a threatened species. The States of

North Carolina and South Carolina had previously expressed their support for the addition of the species to the Federal list.

The Service concurs with the conclusion that *Hexastylis naniflora* merits protection under the Act. The Service has evaluated the available information on the status of, and threats to, this species and believes that threatened status is appropriate.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Hexastylis naniflora* should be classified as a threatened species. Procedures found at section 4(a)(1) of the Act and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Hexastylis naniflora* Blomquist (dwarf-flowered heartleaf) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Gaddy (1981) found that much of the habitat that *Hexastylis naniflora* prefers has been destroyed by peach orchards, pastures, housing developments, and ponds. During searches for additional populations of the species, Gaddy (1981) discovered that many small ponds had been constructed at what were formerly springy creekheads. Many of these areas may have supported the species prior to being impounded.

A large number of the known *Hexastylis naniflora* populations occur near expanding urban areas and are threatened by the residential, commercial, and industrial development associated with this growth. Populations occurring in more rural areas are threatened by habitat alteration or loss from land conversion to pasture or other agricultural uses, cattle grazing, intensive timber harvesting, residential construction, and construction of small ponds. Only four populations currently receive some form of protection. The City of Spartanburg, South Carolina, through a policy statement issued by the commissioners of public works, has agreed to protect most of the largest South Carolina population. Two of the larger North Carolina populations are registered natural areas under the North Carolina Natural Heritage Program, and one South Carolina population is registered by The Nature Conservancy.

These populations thereby receive short-term protection from loss or alteration. Registry agreements are, however, nonbinding; and these three populations remain vulnerable to destruction in the long-term.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Hexastylis naniflora* is not currently a significant component of the commercial trade in native plants; however, the species has potential for horticultural use, and publicity surrounding the listing of the species could generate an increased demand.

C. *Disease or predation.* Not applicable to this species at this time.

D. *The inadequacy of existing regulatory mechanisms.* *Hexastylis naniflora* is listed as an endangered species in North Carolina and is afforded legal protection in that State. North Carolina General Statute 19-B, 202.12-202.19, provides State-listed plants protection from intrastate trade without a permit and provides for monitoring and management of populations of listed species. Although unofficially recognized as an endangered component of South Carolina's flora by the South Carolina Wildlife and Marine Resources Department, *Hexastylis naniflora* has no official protection status in the State. Section 404 of the Clean Water Act could potentially provide some protection for the dwarf-flowered heartleaf's habitat; however, most of the sites where it occurs do not meet the wetlands criteria of the Clean Water Act. The Endangered Species Act will provide additional protection for *Hexastylis naniflora*.

E. *Other natural or manmade factors affecting its continued existence.* Several of the known populations of *Hexastylis naniflora* occur on steep ravine slopes which also support stands of mixed hardwoods with an understory of mountain laurel (*Kalmia latiflora*) or *Rhododendron* spp. These stands are often very dense and reduce the amount of light reaching the *Hexastylis naniflora* plants growing below. Under these conditions the plants often show reduced vigor and reduced flower and fruit production. Careful, selective logging or natural tree fall and limited understory removal would open up these populations to more light. Additional light, if not accompanied by increased siltation from the intensive soil disturbances associated with forest clear-cutting, probably would benefit these populations (Gaddy 1981).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this

species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Hexastylis naniflora* as a threatened species. Threatened status seems appropriate because of the number of populations that currently exist and the protection provided to several of the larger populations. Critical habitat is not being designated for the reasons discussed below.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. Most populations of this species are small, and loss of even a few individuals to activities such as collection for scientific purposes could extirpate the species from some locations. Taking of listed plants is only regulated by the Act in case of removal, reduction to possession, and malicious damage or destruction from lands under Federal jurisdiction; and removal, cutting, digging up, or destroying in knowing violation of any state law or regulation, including state criminal trespass law. Publication of critical habitat descriptions and maps would increase the vulnerability of the species without significantly increasing protection. The owners and managers of all the known populations of *Hexastylis naniflora* will be made aware of the plant's location and of the importance of protecting the plant and its habitat. Protection of this species' habitat will be addressed through the recovery process and through the Section 7 jeopardy standard. No additional benefits would result from a determination of critical habitat. Therefore, the Service concludes that it is not prudent to designate critical habitat for *Hexastylis naniflora*.

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the

prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service. All of the known populations of *Hexastylis naniflora* are on privately or municipally owned land. The only known Federal activity that may affect this species is the relocation of an interstate highway in South Carolina. A small population consisting of two clumps of plants may be lost during construction of this project. It is not expected that this loss, if it should occur, will significantly affect the survival and recovery of *Hexastylis naniflora*.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce it to possession from areas under Federal jurisdiction. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. In addition, for listed plants the 1988 amendments (Pub. L. 100-478) to the Act prohibit their malicious damage or destruction on Federal lands, and their removal, cutting, digging up, or damaging or destroying in knowing violation of any state law or regulation, including state criminal trespass law. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under

certain circumstances. It is anticipated that few trade permits will ever be sought or issued, since *Hexastylis naniflora* is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27329, Central Station, Washington, DC 20038-7329 (202/343-4955).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

#### References Cited

- Blomquist, H.L. 1957. A revision of *Hexastylis* of North America. *Brittonia* 8(4):255-281.  
Gaddy, L.L. 1980. Status report on *Hexastylis naniflora* Blomquist. Unpublished report prepared under contract to the U.S. Fish and Wildlife Service, Southeast Region, Atlanta, GA. 32 pp.  
Gaddy, L.L. 1981. The status of *Hexastylis naniflora* Blomquist in North Carolina. Unpublished report prepared under contract to the Plant Conservation Program, North Carolina Department of Agriculture. 63 pp.

#### Author

The primary author of this proposed rule is Mr. Robert R. Currie, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Regulation Promulgation

Accordingly, Part 17, Subchapter B, of chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

#### PART 17--[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411; Pub. L. 100-478, 102 Stat. 2306; Pub. L. 100-653, 102 Stat. 3825 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Aristolochiaceae, to the List of Endangered and Threatened Plants:

#### § 17.12 Endangered and threatened plants.

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(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Aristolochiaceae—Heartleaf family:						
<i>Hexastylis naniflora</i> .....	Dwarf-flowered heartleaf .....	U.S.A. (NC, SC).....	T	347	NA.....	NA

Dated: March 14, 1989.

Becky Norton Dunlop,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 89-8899 Filed 4-13-89; 8:45 am]

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